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State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Water Rights
JERRY D. OLDS
State Engineer/Division Director

ORDER OF THE STATE ENGINEER
FOR STREAM ALTERATION APPLICATION NUMBER **07-57-27SA**

This **ORDER** is issued pursuant to statute and in accord with the statutory criteria for approval of a stream alteration application that are described at UTAH CODE ANN. § 73-3-29. The State Engineer has determined that this application does meet the necessary legal criteria to **ORDER** the approval of the application based upon the following Findings of Fact and reasoning set forth in the Discussion.

FINDINGS OF FACT

1. The application was received by the Division of Water Rights ("Division") on August 6, 2007, and circulated for comment to adjacent property owners identified in the application, and to other pertinent governmental agencies for a period of 20 calendar days, said period concluding on August 27, 2007.

2. The application contains the following information:
   - The stated description of the proposed project is: To relocate, enhance, and restore a portion of Big Cottonwood Creek.
   - The stated purpose of the proposed project is: To eliminate old, inadequate bridges and walls, reduce potential flood and erosion damage, and provide for a more natural urban stream for the Cottonwood Mall reconstruction project.

3. A site visit was conducted by Division personnel on August 6, 2007, with the following persons in attendance:
   - Hollis Jencks – U.S. Army Corps of Engineers
   - Steve Jensen – Salt Lake County Engineering
   - Chris Springer – Salt Lake County Engineering
   - Chuck Williamson – Utah Division of Water Rights
   - Ted Didas – McNeil Engineering
   - Kathy Olson – General Growth Properties

   The following observations were made:
   - The upstream reach of the proposed project area consists of a concrete lined rectangular channel.
   - Significant debris (concrete, asphalt) lines the channel through the middle and lower sections of the project area.
   - The observed alignment of Big Cottonwood Creek is likely not a natural alignment, but was probably located to its present position during construction of the original Cottonwood Mall.

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- An existing diversion structure owned and operated by Salt Lake City Corporation will be impacted by the proposed project.
- A mixture of both invasive and native tree species exist along the middle and lower sections of the proposed project area.

4. The Division received comments or objections on the proposed project from:
   - Chris Springer – Salt Lake County Engineering
   - John Mann – Utah Division of Water Rights
   - Karryn Greenleaf – Salt Lake City Corporation
   - Matthew Seddon – Office of Historic Preservation

   The comments or objections received by the Division are summarized as follows:
   - Salt Lake County Engineering will be requiring additional modeling efforts which decrease bank slopes from 1.5:1 to 2:1, as well as modeling on the effects on the Flood Zone during a 100 year event.
   - Salt Lake City Corporation should review and approve any modifications to the existing Big Ditch diversion structure.
   - Cultural resource identification efforts may be warranted if the project involves more than minimal impacts.

5. Other pertinent facts include:
   - Salt Lake County Flood Control approved Flood Control Permit Number 2370 on November 15, 2007.
   - Notification was received from Salt Lake City Corporation that modifications to the Big Ditch diversion structure are acceptable on November 16, 2007.

DISCUSSION

1. Based on a review of the Division's water rights records and/or a review of the application by personnel of the Division's regional office, it is the opinion of the State Engineer that the project will not impair vested water rights. Salt Lake City Corporation has reviewed and approved the proposed modifications to the Big Ditch diversion structure.

2. It is the opinion of the State Engineer that the project will not unreasonably or unnecessarily affect recreational use or the natural stream environment. Native tree species will be preserved to the maximum extent possible throughout the middle and lower portions of the project area. Removal of debris and new stabilization efforts will enhance the stream corridor and reduce sedimentation to the Big Cottonwood Creek channel.

3. It is the opinion of the State Engineer that the project will not unreasonably or unnecessarily endanger aquatic wildlife. Installation of instream J-hook barbs should enhance fish habitat and be overall beneficial to aquatic organisms.

4. It is the opinion of the State Engineer that the project will not unreasonably or unnecessarily diminish the natural channel's ability to conduct high flows. Review of the application by Salt Lake County Flood Control has demonstrated that the project will not result in significant changes to channel capacity.

5. It is the opinion of the State Engineer that cultural resource impacts can be mitigated through appropriate conditions as set forth below.

6. Other comments or concerns submitted by interested persons or parties are not believed to be within the purview of the State Engineer in evaluating an Application to Alter a Natural Stream.

ORDER

Stream Channel Alteration Application No. 07-57-27SA, submitted in the name of General Growth Properties – Kathy Olson, applicant, for relocation, rehabilitation, and re-stabilization of the channel, as well as re-construction of existing bridges and a diversion structure associated with Big Cottonwood Creek, a natural stream located in Salt Lake County, Utah, is hereby APPROVED, contingent upon the conditions outlined in this **ORDER**. This approval also constitutes compliance with Section 404 (e) of the Clean Water Act (33 USC 1344) pursuant to General Permit 040 issued to the State of Utah by the U.S. Army Corp of Engineers on May 14, 2004. The applicant is hereby authorized to conduct the work detailed in the application and supporting documentation, as described in this **ORDER**. Any modification or addition to the work may require additional authorization and/or application resubmittal.

1. The expiration date of this order is **November 16, 2008**. The expiration date may be extended, at the State Engineer's discretion, by submitting a written request outlining the need for the extension and the reasons for the delay in completing the proposed stream alteration.

2. A copy of this order must be kept onsite at any time the work authorized under this order is in progress.

3. Work must be accomplished during a period of low flow. Sediment introduced into stream flows during construction must be controlled to prevent increases in turbidity downstream. Flows must be diverted away from the construction area using a non-erodible cofferdam or other means of bypass.

4. Impacts to the stream channel and surrounding environment must be minimized. Vegetation should not be destroyed, but if some disturbance is necessary, then revegetating with native species will be required, especially in the case of woody shrubs. The channel contours and configuration must not be changed except in the case of bank contouring for stabilization purposes.

5. Whenever an applicant causes the water turbidity in an adjacent surface water to increase 10 NTU's or more, the applicant shall notify the Division of Water Quality.

6. If historical or archaeological resources such has human remains (skeletons), prehistoric arrowheads/spear points, waste flakes from stone tool production, pottery, ancient fire pits, historical building foundations/remains, historical artifacts (glass, ceramic metal, etc.) are found during construction, call the Division of Water Rights at 801-538-7404 and Matt Seddon of the Division of State History at 801-533-3555.

7. Cement is toxic to aquatic organisms, and its introduction into waters of the United States would constitute a violation of the Clean Water Act. Cement or concrete may not be allowed to enter stream flows. Water must be excluded from areas where concrete or cement is used until it has set. Contaminated water pumped from the construction area may not be discharged in a manner that will allow it to enter flows. Equipment used during this type of work must be washed well away from the channel.

8. To address debris passage and boater safety, the lowest point on the bridge span must allow a minimum clearance of 4 feet above the ordinary high water mark. To avoid excessive stream velocities, the abutments shall not encroach on the ordinary high water mark.

9. Riprap must consist of only clean, properly sized angular rock, which must be keyed deeply into the streambed to prevent undercutting. A filter must be placed behind if necessary (i.e., if soils are fine grained, non-cohesive, and/or erodible). Demolition debris or refuse will not be allowed, nor material such as bricks, concrete, asphaltic material [either natural (tar sand, oil shale, etc.) or man made].

10. Fill materials should be free of fines, waste, pollutants, and noxious weeds/seeds.

11. Equipment should work from the top of the bank or from the channel to minimize disturbance to the riparian area and to protect the banks. Heavy equipment should avoid crossing and/or disturbing wetlands.

12. Machinery must be properly cleaned and fueled offsite prior to construction.

13. Excavated material and construction debris may <u>not</u> be wasted in any stream channel or placed in flowing waters, this will include material such as grease, oil, joint coating, or any other possible pollutant. Excess materials must be wasted at an upland site well away from any channel. Construction materials, bedding material, excavated material, etc. may <u>not</u> be stockpiled in riparian or channel areas.

14. Best Management Practices should be implemented and maintained during any streamside or instream work to minimize sedimentation, temporary erosion of stream banks, and needless damage or alteration to the streambed.

15. Approval of this application does not authorize trespass, easements, rights-of-way, or any other access and land use permits. It is the responsibility of the applicant to obtain any such authorizations as may be necessary for this proposal.

16. Within 30 days after the completion of this project, the attached compliance certification form must be completed and returned to the U.S. Army Corps of Engineers. Failure to return this compliance certification form would invalidate U.S. Army Corps of Engineers General Permit 040, thereby placing the applicant in violation of Section 404 of the Clean Water Act.

Your contact with the Division is Chuck Williamson, who can be reached at telephone number (801) 538-7404.

This **ORDER** is subject to the provisions of UTAH ADMIN. CODE R. 655-6-17 of the Division of Water Rights and to UTAH CODE ANN. §§ 63-46b-13 and 73-3-14, which provide for persons or parties with legal standing to file either a Request for Reconsideration with the State Engineer or an appeal with the appropriate District Court. A Request for Reconsideration must be filed with the State Engineer within 20 days of the date of this **ORDER**. However, a Request for Reconsideration is not a prerequisite to filing a court appeal. A court appeal must be filed within 30 days after the date of this **ORDER**, or if a Request for Reconsideration has been filed, within 30 days after the date the Request for Reconsideration is denied. A Request for Reconsideration is considered denied when no action is taken within 20 days after the Request is filed.

Dated this 16th day of November, 2007.

David K. Marble, P.E.
Assistant State Engineer

Enclosure

Mailed a copy of the foregoing Order this 16th day of November, 2007, to:

Kathy Olson
General Growth Properties
35 Century Park Way
Salt Lake City, UT 84115

Corps of Engineers
John Mann - Regional Engineer
Dave Ruiter - EPA
Carolyn Wright - Dept. of Natural Resources
Ashley Green - Wildlife Resources
Matt Seddon – State History
Chris Springer – Salt Lake County
Ted Didas – McNeil Engineering

By: Judith L Mattson
Judy Mattson
Secretary